CLAIMS

1) Method for controlling the condensate or frost formation in chocolate shell production by means of a mould (2) provided with a plurality of recesses (3) for liquefied or softened chocolate (4) and by means of a die (5), cooled by cooling means (7) and including a plurality of protrusions (6) each fit to be inserted into a respective below recess (3) to mould a chocolate shell, in cooperation therewith, in a maximum approach condition (A) between the die (5) and the mould (2); the method being characterized in that provides to blow dehumidified air (50), at least in mutual detachment conditions (D) of the mould (2) and the die (5), nearly at ambient pressure, in direction of protrusions (6) through at least a supply means (8) whose outlet (9) flows directly into the environment, so avoiding the condensate or frost formation at least on the protrusions (6).

2) Method according to claim 1 characterized in that provides to blow the dehumidified air (50) through supply means (8) positioned in correspondence of each side of die (5).

3) Method according to claim 1 characterized in that provides to blow dehumidified air (50) having a humidity percentage ranging between around 0% and around 60%.

4) Method according to claim 1 characterized in that provides to blow dehumidified air (50) having a temperature ranging between 0° C and 35° C, preferably of around 22° C.

5) Method according to claim 1 characterized in that provides to dehumidify the ambient air through humidity condensation by means of a radiator exchanger (14) crossed by a cooling fluid and by the ambient air in order to obtain dehumidified air (50).

6) Method according to claim 1 characterized in that provides to dehumidify the ambient air by humidity absorption by means of a drier (16) with disks provided with hygroscopic material in order to obtain dehumidified air (50).

7) Method according to claim 6 characterized in that provides to cool ambient air at a temperature ranging between around 0° C and around 30° C through a radiator exchanger (14) crossed by a cooling fluid and by the ambient air, before the dehumidification by humidity absorption by means of disk drier (16).

8) Method according to claim 5 or claim 7 characterized in that provides to use in the exchanger (14) a fluid cooled by the cooling means (7) of die (5).

9) Method according to claim 4 characterized in that provides to heat the dehumidified air (50) before blowing.

10) Method according to claim 1 characterized in that provides to filter the dehumidified air (50) before blowing.

11) Method according to claim 1 characterized in that provides to stop or to reduce the blowing in correspondence of the maximum approach condition (A).

12) Method according to claim 3 and 4 characterized in that provides to regulate at least one between humidity percentage and temperature of the dehumidified air (50) in accordance with the typology of chocolate (4) and/or the duration of the maximum approach condition (A).

13) Device for controlling the condensate or frost formation in chocolate shell production by means of a mould (2) provided with a plurality of recesses (3) for liquefied or softened chocolate (4) and by means of a die (5), cooled by cooling means (7) and including a plurality of protrusions (6), each fit to be inserted into a respective below recess (3) to mould a chocolate shell, in cooperation therewith, in a maximum approach condition (A) between the die (5) and the mould (2); the device (1) being characterized in that includes:

- at least a supply means (8) whose outlet (9) flows directly into the environment and is orientated in direction of protrusions (6);
- dehumidification means (10) fit to feed at least a supply means (8) with dehumidified air (50);

the supply means (8) being fit to blow the dehumidified air (50) nearly at ambient pressure, at least in mutual detachment conditions (D) of mould (2) and die (5).

14) Device according to claim 13 characterized in that the outlet (9) of each supply means (8) has elongated shape and approximately positioned parallel to a respective side of die (5).

15) Device according to claim 13 characterized in that each outlet (9) is aligned to or below the die (5) and is inclined toward the latter.

16) Device according to claim 13 characterized in that each outlet (9) has a length approximately equal to the length of the corresponding side of die (5).

17) Device according to claim 13 characterized in that includes a supply means (8) for each side of the die (5).

18) Device according to claim 13 characterized in that each supply means (8) has an approximately bent delta shape with a side having the outlet (9) and the opposed vertex having a connection (11) for a duct (12) of pneumatic connection to the dehumidification means (10).

19) Device according to claim 13 characterized in that each supply means (8) is fixed to the die (5) and the mould (2) below is vertically driven by respective lifting means between the maximum approach condition (A) and the mutual detachment condition (D).

20) Device according to claim 13 characterized in that the dehumidification means (10) include a radiator exchanger (14) crossed by the ambient air to obtain dehumidified air (50), blown in the duct (12) by blowing means (15); the radiator exchanger (14) being cooled by a cooling fluid, refrigerated by a refrigerating machine (13) and fed to the die by the cooling means (7).

21) Device according to claim 13 characterized in that the dehumidification means (10) include a drier (16) with rotating disks provided with hygroscopic material in order to obtain dehumidified air (50) blown in the duct (12) by blowing means (15).

22) Device according to claims 20 and 21 characterized in that the dehumidification means (10) are connected in flow communication downstream the radiator exchanger (14).

23) Device according to claim 13 characterized in that the duct (12) includes filter means (17) of the dehumidified air (50).